

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) A cancellation server ~~for canceling cryptographic puzzles, the puzzles associated with identifiers, for use in~~ of a digital delivery system ~~comprising an intended recipient of a digital object including a cryptographic puzzle, the~~ cancellation server ~~in connection with~~ communicatively coupled to at least one database, and configured for executing the steps of:
receiving the an identifier associated with ~~the recipient's~~ a cryptographic puzzle attached to a digital object intended for delivery to a recipient;
~~querying the at least one database with the identifier; and~~
validating the identifier by verifying that the identifier does not exist in the at least one database; and
upon validating, canceling the intended recipient's cryptographic puzzle if the query fails, by causing an entry to be stored in the at least one database, wherein the entry comprises and storing in the at least one database, an entry comprising the identifier or information derived from the identifier.
2. (Currently amended) The cancellation server of claim 1 further executing the step of transmitting to the recipient, an ACCEPT response if the identifier is validated. ~~query fails.~~
3. (Currently amended) The cancellation server of claim 1 further executing the step of transmitting to the recipient, a REJECT response if the identifier is not validated. ~~query succeeds.~~
4. (Currently amended) The cancellation server of claim 1 wherein ~~the puzzles are further associated with timestamps,~~ the server is further configured for executing the step of receiving ~~the~~ a timestamp associated with the ~~recipient's~~ cryptographic puzzle, and ~~wherein the entry to be stored~~ storing in the at least one database, if the identifier

- is validated, ~~query fails further comprises~~ the timestamp or information derived from the timestamp.
5. (Currently amended) The cancellation server of claim 4 further executing the step of causing an entry to be removed from the database if ~~its~~ the timestamp falls outside a threshold range.
 6. (Currently amended) The cancellation server of claim 1 wherein verifying that the identifier does not exist in the at least one database ~~querying the at least one database~~ comprises computing a hash of the identifier.
 7. (Currently amended) The cancellation server of claim 6 ~~further corresponding~~ wherein the identifier is hashed according to a range of values for a peer-to-peer distributed lookup service, ~~and the identifier is hashed to a value within the range.~~
 8. (Currently amended) The cancellation server of claim 1 ~~in connection with~~ communicatively coupled to a second cancellation server for providing data stored in the at least one database to the second cancellation server.
 9. (Currently amended) The cancellation server of claim 1 ~~in connection with~~ communicatively coupled to a second cancellation server for querying ~~at least one an~~ additional database associated with the second cancellation server.
 10. (Original) The cancellation server of claim 9 wherein the cancellation server and the second cancellation server communicate through a peer-to-peer network.
 11. (Original) The cancellation server of claim 1 wherein the digital object is an electronic mail message.
 12. (Currently amended) A puzzle checker ~~for verifying solutions to cryptographic puzzles, the puzzles associated with identifiers and timestamps,~~ for use in a digital

delivery system ~~comprising an intended recipient of a digital object including a cryptographic puzzle and solution~~, the puzzle checker ~~in connection with~~ communicatively coupled with a at least one cancellation server, and configured for executing the steps of:

transmitting ~~the~~ to the cancellation server, an identifier associated with ~~the a~~ a cryptographic puzzle attached to a digital object; to the at least one cancellation server; and

receiving processing the digital object if a REJECT response is received from the at least one cancellation server as a result of the identifier being already present in a database of the cancellation server; and

processing the digital object in response to receiving the REJECT response.

13. (Original) The puzzle checker of claim 12 wherein processing the digital object comprises removing the digital object.
14. (Original) The puzzle checker of claim 12 wherein processing the digital object comprises marking the digital object for subsequent filtering.
15. (Original) The puzzle checker of claim 12 wherein processing the digital object comprises modifying the priority of the digital object.
16. (Currently amended) The puzzle checker of claim 12 further executing the steps of:
verifying whether ~~the a~~ a solution solves the puzzle, and
processing the digital object if the solution does not solve the puzzle.
17. (Currently amended) The puzzle checker of claim 12 further executing the steps of
confirming whether ~~the a~~ a timestamp associated with the cryptographic puzzle is
within a threshold range; and ~~processing the digital object~~ generating the REJECT
response if the timestamp is outside the threshold range.
18. (Currently amended) The puzzle checker of claim 12 further executing the step of:

computing a hash of the identifier;

wherein the transmitting step further comprises transmitting the hash of the identifier to the ~~at least one cancellation server corresponding to the hash of the identifier~~.

19. (Currently amended) The puzzle checker of claim 12 wherein the puzzle checker ~~resides at the intended~~ is located in a recipient computer.
20. (Currently amended) The puzzle checker of claim 12 wherein the puzzle checker ~~resides at~~ is located an intermediary server.
21. (Canceled)
22. (Currently amended) A puzzle creator for generating ~~and solving cryptographic puzzles for use in a digital delivery system comprising a puzzle checker in connection with at least one cancellation server and an intended recipient of a digital object including a cryptographic puzzle and solution~~, the puzzle creator configured for executing the steps of:
 - generating an identifier;
 - generating a timestamp;
 - generating a cryptographic puzzle using the identifier and timestamp; ~~and~~
 - computing a solution to the cryptographic puzzle; and
 - whereby providing the puzzle, solution, timestamp and identifier for use as an attachment ~~are attached to the~~ a digital object for delivery to ~~the intended~~ a recipient.
23. (Original) The puzzle creator of claim 22 wherein the identifier comprises a string of random bits.
24. (Original) The puzzle creator of claim 22 wherein the identifier comprises a string of at least 128 bits.

25. (Original) The puzzle creator of claim 22 wherein computing a solution to the cryptographic puzzle requires more than about seven seconds of computational time.
26. (Currently amended) The puzzle creator of claim 22 further executing the steps of:
receiving a request from ~~the~~ a sender of the digital object;
transmitting the identifier, timestamp, puzzle and solution to the sender.
27. (Original) The puzzle creator of claim 26 further executing the step of:
receiving payment from the sender of the digital object.
28. (Currently amended) A method for ~~canceled~~ using a cryptographic puzzle attached to a digital object for delivery through puzzles, the puzzles associated with identifiers, for use in a digital delivery system comprising at least one database in connection with a first cancellation server and an intended recipient of a digital object including a cryptographic puzzle, the method comprising the steps of:
receiving ~~the~~ an identifier associated with ~~the recipient's~~ the cryptographic puzzle;
~~querying the at least one database with the identifier; and~~
validating the identifier by verifying that the identifier does not already exist in a database; and
upon validating, canceling the ~~intended recipient's~~ cryptographic puzzle ~~if the query fails, by causing an entry to be stored in the at least one database, wherein the entry comprises~~ and storing in the database, the identifier or information derived from the identifier.
29. (Currently amended) The method of claim 28 ~~wherein the puzzles are further associated with timestamps, the method further comprising the step of receiving the a timestamp associated with the recipient's cryptographic puzzle, and wherein the entry to be stored in the at least one database if the query fails further comprises~~ upon validating, storing in the database, the timestamp or information derived from the timestamp.

30. (Original) The method of claim 29 further comprising the step of causing an entry to be removed from the database if its timestamp falls outside a threshold range.
31. (Currently amended) The method of claim 28 further comprising the step of ~~providing~~ transferring data in the at least one from the database to a second database ~~cancellation server.~~
32. (Currently amended) The method of claim 28 validating the identifier further ~~comprising the step of~~ comprises querying ~~an at least one a second~~ database ~~associated with a second cancellation server.~~
33. (Currently amended) The method of claim 32 wherein the ~~first cancellation server and the second cancellation server communicate through~~ two databases are part of a peer-to-peer network.
34. (Currently amended) The method of claim 28 wherein ~~the first cancellation server corresponds to a range of values for a distributed hash table, and~~ the identifier is hashed to a value within ~~the~~ a predefined range of values.
35. (Original) The method of claim 28 wherein the digital object is an electronic mail message.
36. (Currently amended) A computer-readable storage medium, having stored thereon, ~~including computer-executable instructions facilitating the cancellation of cryptographic puzzles, the puzzles associated with identifiers, for use in a digital delivery system comprising at least one database in connection with a first cancellation server and an intended recipient of a digital object including a cryptographic puzzle, said computer-executable instructions~~ for executing the steps of:

~~receiving the~~ validating an identifier associated with ~~the recipient's a~~
cryptographic puzzle by verifying that the identifier does not already exist in a
database;

~~querying the at least one database with the identifier; and~~

upon validating, canceling the intended recipient's the cryptographic puzzle if
~~the query fails, by causing an entry to be stored in the at least one database, wherein~~
~~the entry comprises~~ that is attached to a digital object; and

storing in the database, a new entry comprising the identifier or information
derived from the identifier.